

CLAIM AMENDMENTS

Claims 1 through 42 (Cancelled).

Claim 43: Electronic voting system for collecting and counting votes from individual voters using electronic polling equipment in an election comprising a list of subjects to be elected, wherein a vote of an individual voter comprises an election of one of a group including:

- one subject of said list, in an election of a single subject, and
- one combination of subjects of said list, in an election of a combination of subjects,

wherein said votes being forwarded by means of a data network, said electronic voting system comprising:

- means for generating a unique personal key for each individual voter entitled to said election, which unique personal key is to be communicated to said individual voter;
- means for generating one of a group including:
 - a unique subject code for each subject on said list, in an election of a single subject, and
 - a unique subject combination code for each combination of subjects on said list, in an election of a combination of subjects;
- means for generating a reference election record for each individual voter comprising all potential virtual ballot forms for said individual voter, by calculating a unique voter identity code for said individual voter from a unique election code for said election and said unique personal key of said voter, and by calculating one of a group including:
 - a unique subject identity code for each subject on said list, from each unique subject code and said unique personal key of said voter, in an election of a single subject, and

- a unique subject combination identity code for each combination of subjects on said list from each unique subject combination code and said unique personal key of said voter, in an election of a combination of subjects,

and wherein said calculated identity codes form part of said virtual ballot forms;

- means for storing said reference election records for said individual voters;

- means for loading a tool in said polling equipment of said individual voter wherein said tool comprises means for calculating said unique voter identity code of said voter from said unique election code and said unique personal key communicated to said voter, for calculating one of a group including:

- a unique subject identity code of a subject elected by said voter, from said unique subject code of said subject elected by said voter and said unique personal key of said voter, in an election of a single subject, and

- a unique subject combination identity code for the combination of subjects elected by said voter, from said unique subject combination code for said combination of subjects elected by said voter and said unique personal key of said voter, in an election of a combination of subjects,

and for generating a virtual ballot form comprising said calculated identity code, using said polling equipment;

- means for forwarding said virtual ballot form by said polling equipment over said data network;

- means for receiving and collecting said virtual ballot form forwarded by said polling equipment;

- means for verifying each collected virtual ballot form with respect to its presence in said reference election records of said voters;

- means for counting votes;

- means for establishing an election result, and

- validating means for validating votes from said collected virtual ballot forms, which validating means are arranged in such way that from a collection of at least two virtual ballot

forms associated with an identical voter identity code, one virtual ballot form of said collection is validated as one valid vote of said voter and remaining virtual ballot forms of said collection are marked as duplicate if said virtual ballot forms of said collection are identical as to one of a group including:

- said subject elected by said voter, in an election of a single subject, and
- said combination of subjects elected by said voter in an election of a combination of subjects,

and all virtual ballot forms of said collection are marked invalid if said virtual ballot forms of said collection are not identical as to one of a group including:

- said subject elected by said voter, in an election of a single subject, and
- said combination of subjects elected by said voter in an election of a combination of subjects.

Claim 44: Electronic voting system according to claim 43, wherein said validating means form part of said means for verifying said collected virtual ballot forms.

Claim 45: Electronic voting system according to claim 43, wherein said validating means form part of said means for counting said votes.

Claim 46: Electronic voting system according to claim 43, further comprising confirmation means for generating a receipt indicating that a virtual ballot form has been received from said polling equipment of said voter and means for delivering said receipt comprising a unique receipt confirmation value in readable form at said polling equipment of said voter.

Claim 47: Electronic voting system according to claim 43, further comprising means for publishing a list of voters entitled to said election, said list of subjects to be elected in said election and said reference election records for said individual voters, enabling public inspection

before a date of said election, and entry means for each individual voter using said unique personal key for inspection of said reference election record for said individual voter.

Claim 48: Electronic voting system according to claim 43, further comprising means for publishing said election result, comprising a record of valid votes as awarded for said collected virtual ballot forms after been submitted for verification and validation, enabling public inspection, and entry means for each individual voter using the unique personal key for inspection of an account of said virtual ballot form forwarded by said polling equipment of said individual voter.

Claim 49: Electronic voting system according to claim 43, further comprising means for generating and storing a reference service identity code for each individual voter entitled to said election, which reference service identity code is calculated from a fixed part of said unique personal key of said voter and information related to said election and means for keeping a status record of said voter at said means for receiving and collecting of said virtual ballot forms, wherein said status record is associated with said reference service identity code of said voter.

Claim 50: Electronic voting system according to claim 43, wherein said tool to be loaded in said polling equipment of said voter is arranged for calculating a service identity code from a fixed part of said unique personal key of said voter and information related to said election and for forwarding said service identity code to said means for receiving and collecting said virtual ballot forms.

Claim 51: Electronic voting system according to claim 43, further comprising communication means for communicating said unique personal key to each individual voter entitled to said election, said communication means comprises at least one of a group including:

- means for electronically storing said unique personal key in a chip card of said voter,

- data communication means for communicating said unique personal key to said voter by a data network including Internet, a fixed, a mobile data communication network, including a Short Message Service, and
- means for providing said unique personal key on a hard copy in at least one of a human readable form and a machine readable form, including a text message on paper, for communicating by mail to said voter.

Claim 52: Electronic voting system according to claim 51, wherein said hard copy is cast as a physical ballot form, further comprising said list of subjects to be elected by said voter.

Claim 53: Electronic voting system according to claim 43, wherein said polling equipment is arranged for operatively connecting same to data input means comprising at least one of a group including:

- a chip card reader,
- a keyboard,
- a mouse,
- a screen,
- a bar code reader, and
- voice conversion means.

Claim 54: Electronic voting system according to claim 43, wherein said means for receiving and collecting virtual ballot forms are arranged for receiving and collecting virtual ballot forms other than forwarded by polling equipment of a voter, including physical ballot forms received by mail and converted into virtual ballot forms by automatic ballot form reading and conversion means.

Claim 55: Electronic voting system according to claim 54, wherein said automatic ballot form reading and conversion are appointed a low value of priority.

Claim 56: Electronic voting system according to claim 55, wherein said means for verification and validating are arranged such that from a collection of at least two virtual ballot forms associated with an identical voter identity code and being collected by means that have been appointed differing values of priority, only virtual ballot forms having a higher value of priority are submitted for verification and validation.

Claim 57: Electronic voting system according to claim 43, wherein said means for generating one of a group including a unique subject code for each subject on said list, in an election of a single subject, and a unique subject combination code for each combination of subjects on said list, in an election of a combination of subjects; said means for generating a unique voter identity code; and said means for generating a reference election record for each individual voter entitled to said election comprise cryptographic generator and calculator means.

Claim 58: Electronic voting system according to claim 57, wherein said cryptographic generator and calculator means are arranged for symmetric encryption.

Claim 59: Electronic voting system according to claim 43, wherein said means for presenting said list of subjects at said polling equipment of a voter; said means for loading said tool in said polling equipment of a voter; said means for receiving and collecting said virtual ballot form forwarded by said polling equipment; and said confirmation means are supported by computer equipment comprising at least one computer server.

Claim 60: Electronic voting system according to claim 43, wherein said means for loading said tool in said polling equipment of a voter; said means for receiving and collecting said virtual ballot forms forwarded by said polling equipment; said confirmation means; and said polling equipment are arranged for providing secure data transmission over said data network.

Claim 61: Electronic voting system according to claim 43, wherein said means for generating a unique personal key for each individual voter; said means for generating said unique voter identity code for each individual voter; said means for generating said unique identity code for one of a group including a unique subject code for each subject on said list, in an election of a single subject, and a unique subject combination code for each combination of subjects on said list, in an election of a combination of subjects; said means for generating said reference election record for each individual voter entitled to said election; said means for verifying a collected virtual ballot form of said individual voter with respect to its presence in said reference election record of said voter; said means for counting votes of said voters; said means for validating votes from said collected virtual ballot forms; and said means for establishing an election result based on said counted votes are supported by computer equipment arranged to be operated under the supervision of an election authority.

Claim 62: Electronic voting system according to claim 43, wherein said polling equipment comprises at least one of a group including:

- a personal computer arranged for providing access to said data network,
- fixed data communication equipment arranged for providing access to said data network, and
- mobile data communication equipment arranged for providing access to said data network.

Claim 63: Method for electronic voting, for collecting and counting votes from individual voters using electronic polling equipment in an election comprising a list of subjects to be elected, from which list an individual voter provides a vote by electing one of a group including:

- one subject of said list, in an election of a single subject, and
- one combination of subjects of said list, in an election of a combination of subjects;

- forwarding of said vote by means of a data network,
- generating a unique personal key for each individual voter entitled to said election;
- communicating said unique personal keys to said individual voters;
- generating one of a group comprising:
 - a unique subject code for each subject on said list, in an election of a single subject, and
 - a unique subject combination code for each combination of subjects on said list, in an election of a combination of subjects;
- generating a reference election record for each individual voter comprising all potential virtual ballot forms for said individual voter, by calculating a unique voter identity code for said individual voter from a unique election code for said election and said unique personal key of said voter, and by calculating one of a group including:
 - a unique subject identity code for each subject on said list, from each unique subject code and said unique personal key of said voter, in an election of a single subject, and
 - a unique subject combination identity code for each combination of subjects on said list from each unique subject combination code and said unique personal key of said voter, in an election of a combination of subjects,

and wherein said calculated identity codes form part of said virtual ballot forms;

- storing said reference election records for said individual voters;
- loading a tool in said polling equipment of a voter;
- electing from said list of subjects at said polling equipment of said voter one of a group comprising:
 - one subject of said list, in an election of a single subject, and
 - one combination of subjects of said list, in an election of a combination of subjects,

by inputting, into said polling equipment, said unique personal key communicated to said voter and one of a group comprising:

- said unique subject code of said subject elected by said voter, in an election of a single subject, and
- said unique subject combination code for said combination of subjects elected by said voter, in an election of a combination of subjects,
- generating a virtual ballot form using said tool loaded into said polling equipment of said voter, by calculating said unique voter identity code from said election code and said unique personal key of said voter, for calculating one of a group including:
 - a unique subject identity code of a subject elected by said voter, from said unique subject code of said subject elected by said voter and said unique personal key of said voter, in an election of a single subject, and
 - a unique subject combination identity code for the combination of subjects elected by said voter, from said unique subject combination code for said combination of subjects elected by said voter and said unique personal key of said voter, in an election of a combination of subjects,

and wherein said calculated identity code forms part of said virtual ballot form;

- forwarding said virtual ballot over said data network;
- receiving and collecting said virtual ballot form forwarded by said polling equipment;
- verifying each collected virtual ballot form with respect to its presence in said reference election records of said voters;
 - counting votes;
 - establishing an election result based on said counted votes, and
 - validating votes from said collected virtual ballot forms, in such way that from a collection of at least two virtual ballot forms associated with an identical voter identity code, one virtual ballot form of said collection is validated as one valid vote of said voter and remaining virtual ballot forms of said collection are marked as duplicate if said virtual ballot forms of said collection are identical as to one of a group including:
 - said subject elected by said voter, in an election of a single subject, and

- said combination of subjects elected by said voter in an election of a combination of subjects,

and all virtual ballot forms of said collection are marked invalid if said virtual ballot forms of said collection are not identical as to one of a group including:

- said subject elected by said voter, in an election of a single subject, and
- said combination of subjects elected by said voter in an election of a combination of subjects.

Claim 64: Method for electronic voting according to claim 63, further comprising the step of generating a receipt comprising a unique receipt confirmation value in readable form indicating that a virtual ballot form forwarded over said data network has been received, and wherein said receipt is delivered at said polling equipment of said voter.

Claim 65: Method for electronic voting according to claim 63, further comprising the step of publishing a list of voters entitled to said election, said list of subjects to be elected in said election and said reference election records for said individual voters, enabling public inspection before a date of said election, and providing access for each individual voter using said unique personal key for inspection of said reference election record for said individual voter.

Claim 66: Method for electronic voting according to claim 65, further comprising the step of publishing said election result comprising a record of said valid votes as awarded for said collected virtual ballot forms after verification and validation, enabling public inspection and providing access for each individual voter using said unique personal key for inspection of a record of said vote for said virtual ballot form forwarded by said polling equipment of said individual voter.

Claim 67: Method for electronic voting according to claim 63, further comprising the steps of generating and storing a reference service identity code for each individual voter entitled

to said election, wherein said reference service identity code is calculated from a fixed part of said unique personal key of said voter and information relating to said election, and keeping a status record for each individual voter in association with said reference service identity code.

Claim 68: Method for electronic voting according to claim 63, further comprising the steps of generating a service identity at said polling equipment of said voter, wherein said service identity code for said voter is calculated from a first part of said unique voter identity code of said voter and information relating to said election, using said tool loaded in said polling equipment of said voter, and forwarding said service identity code to said means for receiving and collecting said virtual ballot form.

Claim 69: Method for electronic voting according to claim 63, further comprising the step of receiving and collecting virtual ballot forms other than forwarded by said polling equipment of a voter, such as physical ballot forms forwarded by mail, and converting said physical ballot forms into virtual ballot forms using automatic ballot form reading and conversion means.

Claim 70: Method for electronic voting according to claim 69, wherein virtual ballot forms converted from physical ballot forms by said automatic ballot form reading and conversion means are appointed a low value of priority.

Claim 71: Method for electronic voting according to claim 70, wherein said step of validating is arranged such that from a collection of two or more virtual ballot forms associated with an identical voter identity code and said virtual ballot forms being collected from different means that have been appointed differing values of priority, only virtual ballot forms collected from means of a higher value of priority are submitted for validation.

Claim 72: Method for electronic voting according to claim 63, wherein said one of a group including a unique subject code for each subject on said list, in an election of a single subject, and a unique subject combination code for each combination of subjects on said list, in an election of a combination of subjects; said means for generating a unique voter identity code; and said means for generating a reference election record for each individual voter entitled to said election are cryptographically generated and calculated.

Claim 73: Method for electronic voting according to claim 72, wherein said identity codes and reference election records are generated and calculated for symmetric encryption.

Claim 74: Method for electronic voting according to claim 63, wherein said steps of generating said unique personal key for each individual voter; said unique voter identity code for each individual voter; said unique identity code for one of a group including a unique subject code for each subject on said list, in an election of a single subject, and a unique subject combination code for each combination of subjects on said list, in an election of a combination of subjects; said reference election record for each individual voter entitled to said election; said verification of a collected virtual ballot form of said individual voter with respect to its presence in said reference election record of said voter; said counting of said votes of said voters; said validating of votes from said collected virtual ballot forms; and establishing an election result based on said counted votes are performed under the supervision of an election authority.

Claim 75: Method for electronic voting according to claim 63, wherein said step of communicating said unique personal key to each individual voter entitled to said election comprises at least one of a group of steps including:

- electronically storing said unique personal key in a chip card of said voter,
- communicating said unique personal key to said voter by a data network including Internet, a fixed and a mobile data communication network including a Short Message Service, and

- providing said unique personal key on a hard copy in at least one of a human readable form and a machine readable form, including a text message on paper, for communicating by mail to said voter.

Claim 76: Method for electronic voting according claim 75, wherein said hard copy is suitable to be cast as a physical ballot form comprising said list of subjects to be elected by said voter.

Claim 77: Method for electronic voting according to claim 63, wherein a reserve list of a limited number of unique reserve keys is generated and said reference election record is generated to comprise virtual ballot forms for said number of unique reserve keys, and wherein a reserve key of said reserve list is issued to a voter who applies for a fresh unique key replacing said unique personal key initially appointed to said voter, wherein said reserve key is appointed to said voter after said initially appointed unique personal key and said corresponding reference election record are withdrawn, and wherein said issue of said reserve key from and said withdrawal of said initially appointed unique personal key are taken into account for the verification of the validity of collected virtual ballot forms.

Claim 78: Method for electronic voting according to claim 63, wherein said polling equipment comprises at least one of a group including:

- a personal computer arranged for providing access to said data network using browser software;
- fixed data communication equipment arranged for providing access to said data network using browser software, and
- mobile data communication equipment arranged for providing access to said data network using browser software,

and wherein said tool is loaded automatically into said polling equipment from said data network.

Claim 79: Method for electronic voting according to claim 63, wherein said data network comprises Internet and said polling equipment comprises a personal computer operatively connected to the Internet, wherein said tool is loaded into said personal computer by means of a Java applet included in a web-page to be selected by a voter for participating in said election.

Claim 80: Method for electronic voting according to claim 63, wherein said polling equipment comprises mobile communication equipment having a SIM-card and wherein said tool is loaded in said SIM-card of said mobile communication equipment for participating in said election by a voter using said mobile communication equipment.

Claim 81: Computer program product, comprising program code means stored on a computer readable medium, for performing said method according to claim 63, if loaded into an internal working memory of a computer and operated by said computer.

Claim 83: Computer program product, comprising program code means stored on a computer readable medium, arranged as a tool for loading into a computer program running on a computer controlled polling equipment for performing said method according to claim 63, if loaded into an internal working memory of said computer and operated by said computer.

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